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Influence of the initial autonomic tone on the state of hemodynamics of primary schoolchildren

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Abstract

The functional state of the cardiovascular system and its reaction to local isometric exercise in seven- and eight-year-old children was studied with consideration for the initial tone of the autonomic nervous system. Using the methods of variational pulsometry and tetrapolar thoracic rheography, it was established that children with predominant sympathetic influences on the heart rate (67-56. 55% of the total number of those examined) had increased stroke and minute blood volumes against the background of relative tachycardia, compared with normo- and vagotonics. In sympathotonic boys, the leading component in the mechanism of urgent adaptation of the cardiovascular system to static exercise is spastic reactions of the vascular bed, which allow this contingent of schoolchildren to be identified as a group of children at high risk of autonomic dystonia with the hypertensive vascular syndrome. © 2012 Pleiades Publishing, Ltd.

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Keywords

adaptation, hemodynamics, initial autonomic tone, primary schoolchildren, static exercise